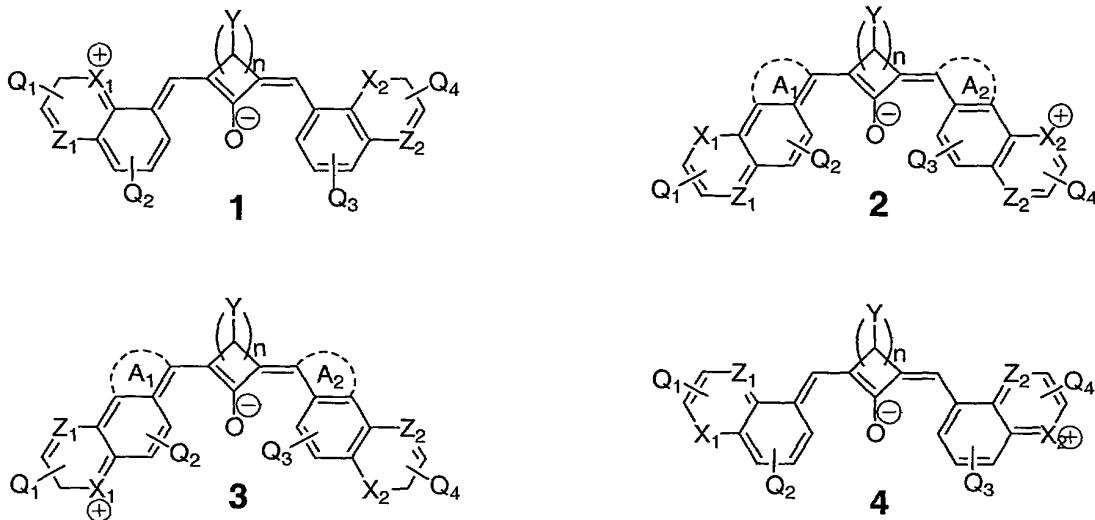


CLAIMS

1. An infrared dye wherein the dye comprises two bridged diarylpolymethine type dyes or derivatives thereof connected together at either the 3, 4, 5 or 6 position by a 5 central moiety such that the two dyes are located on each side of the central moiety, wherein the infrared dye absorbs strongly in the near infrared region of the spectrum but poorly in the visible region of the spectrum.
2. An infrared dye according to claim 1 wherein the central moiety is selected from 10 the group consisting of squarylium, croconium, methinologs thereof and derivatives thereof.
3. An infrared dye of formula 1, 2, 3 or 4 as set out hereunder:

15



wherein A₁ and A₂, taken individually, is/are absent or selected from the group consisting of a 5-membered polyene ring containing 0, 1 or 2 substituents that are 20 selected from the group R;

X₁ and X₂ are individually selected from the group consisting of oxygen, sulfur, selenium, tellurium, CR₁R₂, NR₁, SiR₁R₂, GeR₁R₂, PR₁ where R₁ and R₂, which may be the same or different, are selected from the group R;

Z₁ and Z₂ are individually selected from CR₃ or N where R₃ is selected from the 25 group R;

Q₁, Q₂, Q₃ and Q₄ are individually selected from the group consisting of R₄, a fused 6-

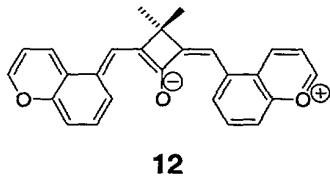
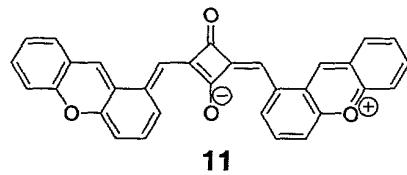
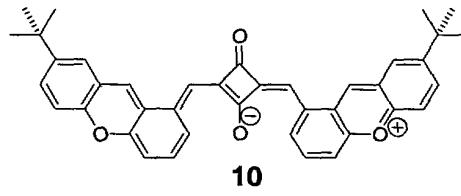
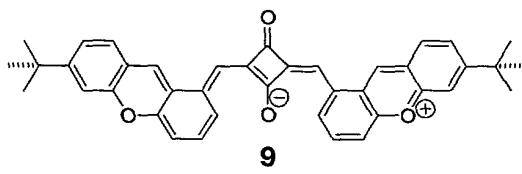
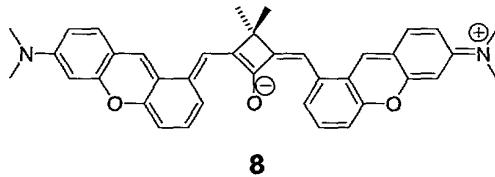
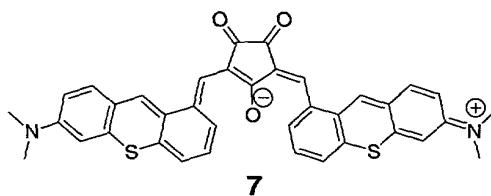
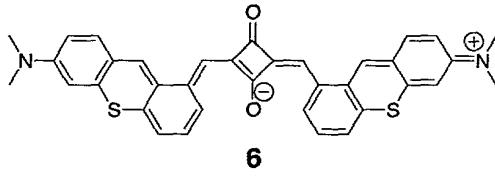
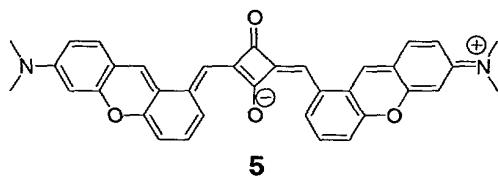
membered aromatic ring optionally substituted with 1 to 4 substituents individually selected from R₅, and fused polyaromatic rings optionally substituted with one or more substituents selected from R₆ wherein R₄, R₅ and R₆ are individually selected from the group R;

R is the group consisting of hydrogen atom, a substituted or unsubstituted alkyl group, a

- 5 substituted or unsubstituted aryl group, a substituted or unsubstituted aralkyl group, a halide atom, a hydroxy group, a substituted or unsubstituted amine group, a substituted or unsubstituted alkoxy group; and

n is 1 or 2 or 3.

10 4. An infrared dye according to claim 3 selected from:



5. An infrared absorbing compound according to claim 1 wherein one or more polar group substituents such as -SO₃H, -NH₂ and -CN are utilized.

6. An infrared printing ink comprising a colorant, wherein the colorant is a dye in accordance with claim 1 or claim 2.

7. An infrared printing ink according to claim 5 which is suitable for ink jet printing
5 ink or offset printing.